

Attorney's Docket 083531-0279295  
Client Reference: 2980530US/PG/KP



ETW

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re PATENT APPLICATION of:  
MARKKU VERKAMA

Confirmation Number: 9392

Application No.: 09/830,028

Group Art Unit: 2686

Filed: August 15, 2001

Examiner: Iqbal, Khawar

For: DIGITAL TELECOMMUNICATION SYSTEM

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**AMENDMENT/RESPONSE TRANSMITTAL**

Transmitted herewith is an amendment/response for this application.

**FEES**

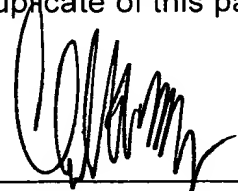
The fee for claims and extension of time (37 C.F.R. 1.16 and 1.17) has been calculated as shown below:

	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NO. PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE	ADDIT. FEE
TOTAL	17	- 20	= 0	X \$ 50.00	= \$ 0.00
INDEP.	2	- 3	= 0	X \$ 200.00	= \$ 0.00
FIRST PRESENTATION OF MULTIPLE DEP. CLAIM				+ \$ 360.00	= \$ 0.00
TOTAL ADDITIONAL CLAIM FEE					\$ 0.00
GRAND TOTAL					\$ 0.00

**FEE PAYMENT**

Authorization is hereby made to charge the amount of \$0.00 to Deposit Account No. 033975. Charge any additional fees required by this paper or credit any overpayment in the manner authorized above. A duplicate of this paper is attached.

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Attorney Docket: 083531-0279295  
Client Reference: 2980530US/PG/K



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In re PATENT APPLICATION of: VERKAMA      Confirmation Number: 9392  
Application No.: 09/830,028      Group Art Unit: 2686

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Examiner: Iqbal, Khawar

Title: DIGITAL TELECOMMUNICATION SYSTEM

REQUEST FOR RECONSIDERATION

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated January 10, 2005, please amend the above-identified application as follows:

Claims 1-2, 4-12 and 14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Mony (U.S. 6,009,383) and Watanabe et al. (U.S. 5,991,642; hereafter "Watanabe") and claims 3, 13 and 15-17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Mony, Watanabe and Valentine et al. (U.S. 6,600,740; hereafter "Valentine"). Applicant traverses the rejection because the cited prior art references, analyzed individually or in combination, fail to disclose teach or suggest all the features recited in the rejected claims.

For example, the cited prior art fails to disclose, teach or suggest a digital telecommunication system "wherein the first and second transcoder units each include speech codecs and each of the terminals comprises one or more speech codecs, the terminals being arranged to provide information regarding the supported one or more speech codecs to their associated switching centres; the first centre is configured to perform handshaking with the second centre, the handshaking including indication of the speech codecs supported by the calling terminal, wherein at least one of the first and second centres is configured to choose the speech codec used commonly by the calling and called terminals, and wherein at least one of the first and second centres is configured to establish call connections that bypass one or more of the transcoder units or to control the transcoder units to transmit encoded speech between the called and calling terminals without performing speech encoding operations so

that speech is encoded and decoded only in the terminals,” as recited in independent claim 1 and its dependent claims.

Similarly, the cited prior art fails to disclose, teach or suggest a centre in a digital telecommunication network configured to “receive information regarding supported one or more speech codecs of a calling terminal and connect a transcoder located in a transcoder unit to a call connection when required, wherein: the centre is configured to perform handshaking with another centre associated with a called terminal, the handshaking including indication of speech codecs supported by the calling terminal associated with the centre, the centre also being configured to choose the speech codec commonly used by the terminals. . .,” as recited in independent claim 14 and its dependent claims.

Mony merely discloses a prior known method for arranging tandem-free operation (TFO) in the IS-54 system, wherein the transcoders are always a part of the transmission path and transcoding is a default setting for the operation. Mony discloses a TFO negotiation between two transcoders, and in response to a successful negotiation for a Mobile-to-Mobile Call (MMC), the transcoders start to operate in a mode, wherein speech data is not transcoded, i.e., a MMC is switched via a bypass circuit. Applicant notes that this operation is exactly what is disclosed as prior known background information in the Applicant’s specification.

However, Mony concentrates purely on TFO because the transcoders are always a part of the transmission path and, for a MMC, the transcoders have to be separately switched off. That approach is fundamentally different than that of the present invention which focuses on transcoder-free operation (TrFO), wherein the transcoders are not a part of transmission path, but are only connected when particularly needed.

The Office Action has erroneously asserted that Mony discloses first and second transcoder units each including speech codecs (i.e., in plural) 18, 18’. To the contrary, the system of Mony is a mobile communication system designed and operating in accordance with the IS-54 standard, which supports only one speech codec, the VSELP codec. Thus, the transcoders of Mony only include the VSELP codec.

The Office Action has further asserted that Mony discloses that the terminals indicate their supported speech codecs to their associated switching centers (at col. 6, lines 14-35 and col. 7, lines 20-51). However, those cited passages, and Mony generally, fail to disclose, teach or suggest any activity, wherein a terminal indicates its speech codecs to a switching center. Such a deficiency is not surprising because Mony merely discloses a terminal of IS-

54 system, which supports only one speech codec, i.e., VSELP codec. Since the Mony system supports only the VSELP codec, there is no need to indicate that to the switching centers.

Applicant notes with interest that, when the Office Action refers to speech codecs, it also refers to Pulse Code Modulation (PCM). However, the record remains unclear whether the Office Action is asserting that the terminal of Mony controls the selection of coding (VSELP/PCM) on the connection between the switching centers. Applicant submits that, to the contrary, the terminal of Mony fails to participate in the selection of inter-MSC coding.

The Office Action also erroneously asserted that Mony discloses a handshaking procedure between the switching centers including an indication of the speech codecs supported by the calling terminal (col. 6, lines 14-30). To the contrary, the referred to passage merely discloses that the handshaking includes information indicating that transcoder operation is enabled in a Mobile-to-Mobile Bypass (MMB) mode, i.e., a mobile-to-mobile call is switched via a bypass circuit of the transcoder. Accordingly, Mony centers merely receive an indication of which mode to use: a PCM-based mode if at least either of the terminals is analog, or a MMB mode, if both terminals are digital. However, because the Mony system supports only the VSELP codec, there is no need to indicate as much between the switching centers.

Watanabe fails to remedy the deficiencies of Mony because Watanabe merely discloses a mobile communication system, wherein an optimum speech coding scheme is selected for a mobile station according to the speech coding scheme capabilities of the mobile station and its corresponding radio zone, i.e., a base station. Watanabe relates to optimizing the use of speech coding schemes in a situation, wherein a new speech coding scheme is being introduced to a mobile communication system.

However, Watanabe fails to disclose, teach or suggest techniques and specifics related to transcoding, or more particularly, avoiding transcoding on MMCs. Accordingly, Watanabe fails to teach or suggest how to arrange TFO or TrFO in a mobile communication system. Therefore, Applicant submits that one of ordinary skill in the art would not have been motivated to combine the teachings of Mony and Watanabe, as asserted by the Office Action. The Office Action asserted that the motivation to combine the teaching of Mony and Watanabe would have been to “enhance switching of communication channels using optimum voice coding system;” however, combining the teachings of Watanabe and Mony

would not have provided such an enhancement. Thus, the motivation is insufficient to support the prior art rejection.

However, even if combined, Mony and Watanabe would not teach a skilled person to arrive to the solution of the present invention. Neither of the references teaches or suggests how to control the operation of the transcoder units such that the TFO is established and a suitable speech codec is selected for the terminals in response to detection of a MMC. Therefore, the combined teachings of Mony and Watanabe fail to disclose, teach or suggest the claimed invention wherein transcoder units each include speech codecs and each of the terminals comprises one or more speech codecs, the terminals being arranged to provide information regarding the supported one or more speech codecs to their associated switching centres and centres are configured to perform handshaking with other centres associated with a called terminal, the handshaking including indication of speech codecs supported by the calling terminal associated with the centre, the centre also being configured to choose the speech codec commonly used by the terminals.

Further, Valentine fails to remedy these deficiencies of Mony and Watanabe because Valentine merely discloses a method for adapting speech codec algorithms on a telecommunication connection including multiple different speech codecs. In Valentine, the originating network and the terminating network perform handshaking, which indicates the codecs used by the originating network/terminal and the terminating network/terminal. If the codecs are different, the speech codec algorithms of both codecs are adapted to produce a best fit encoding matching. Consequently, Valentine also fails to teach or suggest a technique wherein a speech codec is chosen for a tandem-free MMC.

As a result, the claimed invention is patentable over the cited prior art references because their combined teachings fail to provide wherein transcoder units each include speech codecs and each of the terminals comprises one or more speech codecs, the terminals being arranged to provide information regarding the supported one or more speech codecs to their associated switching centres and centres are configured to perform handshaking with other centres associated with a called terminal, the handshaking including indication of speech codecs supported by the calling terminal associated with the centre, the centre also being configured to choose the speech codec commonly used by the terminals. Accordingly, claims 1-17 are patentable over Mony, Watanabe and Valentine.

All rejections and objections having been addressed, it is respectfully submitted that the present application is now in condition for allowance, and a notice to that effect is

VERKAMA -- 09/830,028  
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earnestly solicited. Should there be any questions or concerns regarding this application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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